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UTILIZATION OF E-LOGISTICS IN MULTINATIONAL COMPANIES TO OVERCOME DIFFICULTIES OF TODAY'S ECONOMIC ENVIRONMENT

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Abstract. *As the incredible growth of the Internet is changing the way corporations conduct their business. Logistics service providers must consider changing their traditional logistics system into an e-Logistics system in order to accommodate to the dynamic changes in the commercial world. The purpose of this study is to provide a better understanding of how organizations utilize e-Logistics within their supply chain and how to create a competitive advantage during the economic crisis so that losses be limited if not eliminated.*
To reach this purpose, two research questions are stated (two multinational companies), focusing the factors that influence the e-Logistics system. From the in-depth interviews and used to collect data, the findings show that the e-Logistics system can be described as a network creating value process. The findings further indicate that reliability factors, maintainability factors, software factors and facility, transportation and handling factors, all influence the e-Logistics system.
On the other hand, availability factors, economic factors, organizational factors and test and support equipment factors are of low-level importance for e-logistics system. The second part of the paper focuses on how e-logistics will change the multinational traditional logistics systems and how we can measure (Key Performance Indicators) these changes.

Keywords: competitively, e-logistics, economic crises, measure (key Performance Indicators)

1. E-logistics

E-logistics can be defined in various ways because of the vast process implications and interactions. It can simply mean processes necessary to transfer the goods sold over the internet to the customers (Auramo et. al., 2001) or in a more sophisticated view, elogistics is a wide-ranging topic related to supply chain integration that has the effect of eliminating intermediaries (such as wholesaler or retailers) and fosters the emergence of new players like logisticians, whose role is to adapt traditional logistics chains and to take the requirements of e-business into account[1]. Impact that Internet has on the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services, and related information from the point-of-origin to the point-of consumption in order to meet customers' requirements" is also another definition of e-logistics. Logistics is a subset of SCM, and accordingly, e-logistics is a subset of e-SCM.

1.1. E - Logistics processes

In recognition of the increasing importance of globalization and the resulting need for greater, faster, and more flexible communications, a framework is required to allow any company to establish itself in no time or make optimum use of their legacy applications, run efficiently with minimal cost input. E-Logistics Processes Integration Framework Based on Web Services also called "ELPIF" is (1) common alliance layer (2) adaptation layer; and (3)

dynamic data binding mechanism. This framework can be adopted as a new service delivery model which uses a design pattern and solution templates.

1.2. The work of e - logistics

In last couple of years, different on-line shipping tools have been developed for the e-commerce application developers. Take the example of the transportation industry, UPS provides on-line XML Tools and HTML Tools, and FedEx provides their own Web tools (FedEx API) for their developers to enable the development of on-line shipping tools. In this mixture, unfortunately, we have not seen a common service interface to allow users to easily hook up existing tools. Client application developers have to manually construct different requests for different backend servers that demand much effort and time. Different shipping carriers might require different implementations and could have proprietary platform and their own implementation constraints.

DHL is one of a few logistics companies that came with the solution of transferring client's tracking system and use it instead of asking customers to adapt to DHL system. This might be the right solution nowadays, taking into consideration the actual financial crises where companies are cutting costs and they are not willing to spend any extra money on such changes. Further more Logistics Service Providers (LSPs) should work on a strategy and find a universal solution that enables customers to connect to their track and trace systems without any extra costs.

In order to expedite the shipping process and minimize costs, the shipping solutions must empower the customers and suppliers with the ability to rate, ship and track shipments. Many solutions in today's competitive market have been able to achieve this but they are:

- Platform dependent and unique to the specific shipping carrier. The solutions are not generic so that they could not be considered as a standard and followed by the rest of players
- Windows-based applications that are mostly standalone applications and users are forced to purchase them before actually using them.
- With the development of Web Services, to define a uniform interface for the solution developers becomes technically feasible and itself leads to potential business opportunities The framework, ELPIF, presented proposes to have a common generic interface for all the Shipping Service Providers and all providers could build their Web Services on such a standard interface and then deploy those services in the UDDI Registries for other companies to find and use them. Though we are focused on the shipping industry, the principles embodied in ELPIF can be applied to other domains.
- Blending the Web Services and the common interface approach would result in allowing shipping services to adhere to a model of what could be considered a generic shipping service. This is critical since this allows a shipping service client to design and deploy code to use the generic shipping model, and then at run time use dynamic data binding mechanism to invoke a specific implementation of a shipping service. Because Web Services can be implemented in any programming language, developers are not obligated to change their development environments in order to generate or use Web Services. Consequently, any client application can benefit from the characteristic of architectural independence that is embraced in our framework[2].

For most integration architecture, XML plays a role of trivializing the exchange of business data among companies by providing cross-platform approach in the areas of data encoding and data formatting. For example, SOAP, built on XML, defines a simple way to package information for information exchange across system boundaries. UDDI Registries, on the

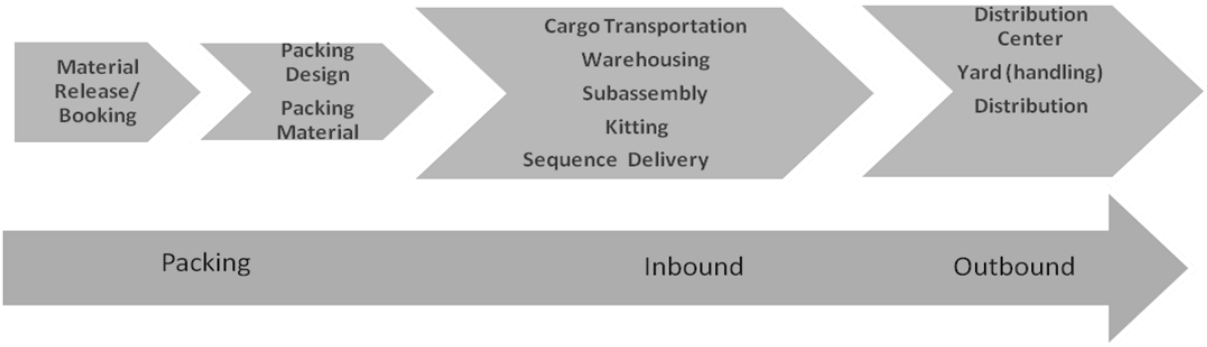
other hand, allow programmable elements to be placed on Web Sites where others can access remotely. By adopting the above technologies, not only do they get interoperability for customers but carriers can use our multi-platform approach to provide better offerings and solutions with the help of which any industry can accomplish their transactions efficiently and profitably.
ELPIF helps businesses act more quickly and more efficiently, and it also provides a methodology of automating process integration, resulting in reducing integration time and cost, increasing the efficiency of service delivery, and gaining competitive advantage in the marketplace.
In order to have a better understanding of how organizations utilize e-Logistics within their supply chain and how to create a competitive advantage during the economic crisis, two multinational companies were studied, focusing the factors that influence the e-Logistics system.

2. Volvo Logistics Corporation (VLC)

Volvo Logistics Corporation (VLC) is a sister company within the Volvo Group, the company develops and provides transport and logistics solutions for the Volvo Group as a whole. Its main customer is Volvo Car Corporation (VCC), which now is owned by the Ford Motor Company. When VCC was sold, VLC went from having its main customer within the Volvo group, to having an external customer from the group. Having its main source of business external of the Volvo group, means that VLC is very dependent upon VCC. In 2001 VCC stood for 49% of the total turnover therefore VLC now concentrates on minimizing its dependence on the car corporation, by handling more of the material movements for the different sub companies within the Volvo Group. There is also a great deal of concentration on trying to find customers external to the Volvo Group.

2.1. The Process of e-Logistics

VOLVO e-Logistics system can be seen in Figure 1



Source: VOLVO Logistics Corporation

Figure 1. VOLVO e-logistics system Overview

First, packing includes Material Release/Booking, Packaging Design, and Packaging Material. The business concept of Volvo Packing is to provide a total solution of packaging for customers in the automotive and manufacturing industries by superior knowledge and performance. One of VLC's services is standard packaging, which VLC distribute in an effective manner to VLC's customers' suppliers and which they then use to send goods to their customers. VLC then distribute this packaging again to a nearby user in the system.

With VLC, the customer can choose between using VLC's standard range of packaging and having packaging material custom-made for them. The system is the same and VLC provide them with full control over the packaging and its costs. If they use VLC's standard range, VLC own the packaging and they only pay when they use it. If they need special packaging, VLC can help them to design and make it in line with their requirements. If they already have their own packaging, VLC's system can help them to have full control over the process. Just like a bank VLC gives the customers online statements of their packaging material accounts. In addition, this information is always available on VLC's web-based service, Emballage Pool Online. The support information system is Volvo Emballage Managing System (V-EMS) which is a Packaging Management System.

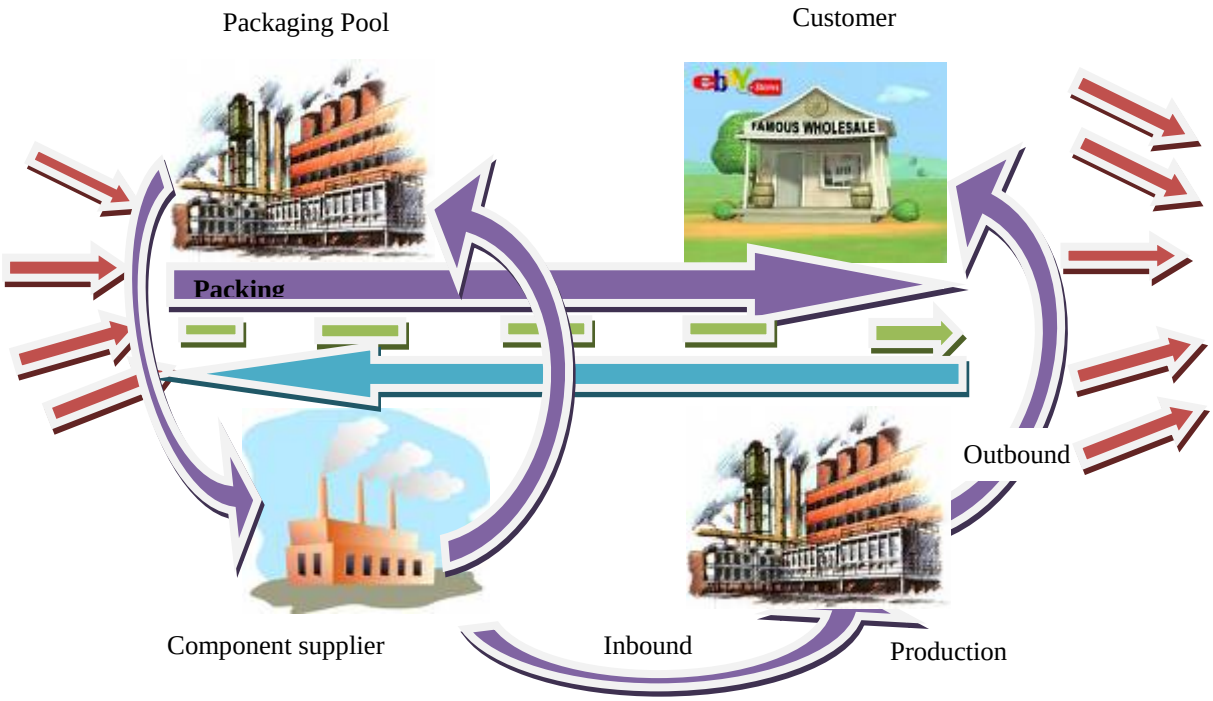
VOLVO’s goal is all about optimizing packaging logistics in order to minimize customers' costs. With the help of a wide product range and an efficient distribution network, VLC can give customers access to the right packaging, wherever they are in the world. The system is simple - every customer uses packaging which comes from an earlier link in the chain or direct from VLC. All customers need do is order the packaging from VLC, using an easily completed standard form.

Second, inbound: it includes Cargo Transportation, Warehousing, Subassembly, and Kitting and Sequence delivery. Detailed analyses of each specific situation and requirements always precede the creation of material flows. VLC's transport companies are able to comply with their rigorous requirements relating to lead times, delivery precision, and total economy for each individual part of the journey. In order to ensure a reliable material flow pattern, VLC participate at an early stage in the design of the logistics system in connection with the whole industrial structure. VLC supports customer studies of developing new products or production plants. VLC also evaluates different material supply scenarios. VLC work primarily with two types of material flow: Full load trailers directly from supplier to the final use point, and so-called "milk-runs" (multi-stop pick-up). This latter encompasses an organized transport schedule from several suppliers, following a pre-determined route. VLC buys in all the necessary transport services, while operation of the terminal itself is either handled in-house or bought in from outside. If the transport services are provided by others, VLC involved with transport management which means VLC monitors all deliveries and ensure that they arrive on time and traffic development which is about maintaining and constantly fine-tuning the transport systems and operating frameworks for all transportation. In addition to this, VLC also operates with storage, sequencing, pre-assembly and goods reception.

Third, outbound: it included Distribution centre, Handling and Distribution. It focuses on ensuring that undamaged vehicles reach every recipient on the promised date. VLC get ability to design highly complex and efficient distribution networks with experience and cooperation with customers. Networks guarantee that large volumes of customer-tailored vehicles will be delivered on the agreed date, directly to the agreed customer and without any time-consuming and costly intermediate stops. VLC continuously evaluate their distribution systems. They also try to inspire all their partners to work actively to meet forthcoming rules and needs.

VLC offer complete services within the outbound area and utilize the possibilities all different brands and type of cars and heavy vehicles gives for logistic combinations. In full co-operation with the customer VLC undertakes responsibility in the following areas: Support product design phase; Logistics development; Damage prevention; Transport purchasing; Operational management; Follow-up and report.

The process of e-Logistics can be seen in Figure 2.



Source: VOLVO Logistics Corporation

Figure 2. Overview of VOLVO E-logistics system process

VOLVO states that: the shipping management and the tracking management are involved in the whole e-Logistics system and the RFQ is used in contracting process. Contracting is responsible for purchasing of transport and logistics services and is performed for external transport and logistics needs, on behalf of the processes Inbound, Outbound, Aviation, and Emballage of Volvo Logistics for its customers. Once goods are shipped, the tracking number is given to the customer and that tracking number is recorded on the Internet. Customers can track their shipment with the help of that number.

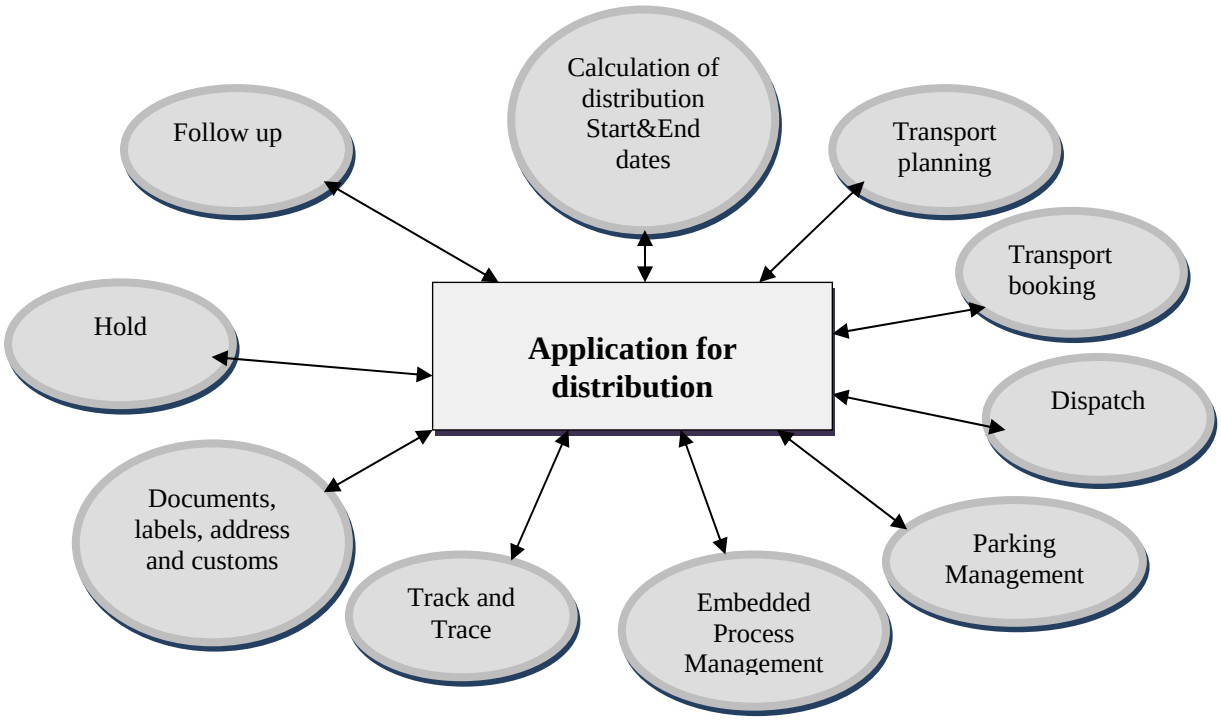
2.2. The Logistics Information System

VOLVO states that they use different information systems and e-tools in different stages.
In packing and inbound part, they use ATLAS project (Advanced Total Logistics for Automotive Supply) and adapt GC3 (G-Log's Global Command and Control Center)'s software named Volvo Emballage Managing System (V-EMS) as their logistics information system. ATLAS will always have updated real-time information about all relevant activities in the material supply process, and will enable us to provide proposals regarding the best transport solution for each individual customer. This will make it a valuable tool in their constant efforts to further improve the delivery precision – from 95 to 98 percent in terms of hourly precision. The ATLAS system is responsible for delivering a configured and rolled-out application to customers, VLC Inbound organization, suppliers and carriers i.e. the ATLAS system is responsible for securing that the processes are efficient and that the IT-system is used as designed and planned. As VOLVO state, there are four major activities in Atlas project as following: the first major activity is that: define requirements and design the e-Logistic process; the second is that: implement the web application to support the collection of the data of transport booking, proof of collection, proof of delivery, pre-arrival notification, and transport status, and implement system administration functionality, aster

that harmonize necessary master data; the third is that: configure, implement and roll-out of new transport execution system which deliver basic cross dock functionality, deliver goods-pre reception functionality, deliver track and trace functionality and deliver tools and reports to measure supplier and carrier KPIs; The last is that: deliver transport planning (including operational optimization) functionality, deliver event management functionality, configure, implement and roll-out of new settlement system, deliver self- billing functionality, deliver reports to measure financial KPIs and tactical optimization.

VOLVO state that with V-EMS, VLC benefits from a Web-based technology that is less expensive to manage, operate and maintain. When fully implemented, logistics information will be accessible on a global basis, through an Internet browser, to those granted access, including customers and suppliers. The V-EMS gives every VLC's business unit increased flexibility and better access to global logistics data. The V-EMS software provides end-to-end visibility information that is frequently updated and can be specifically tailored to the decision-making requirements of every collaborative partner in the network. In addition to enjoying detailed, real-time visibility data, every VLC business unit will benefit from the V-EMS's ability to proactively react to unexpected supply chain events — such as shipment delays or short-shipped quantities — and to manage by exception, ultimately ensuring that every shipment is delivered in an optimal manner. The V-EMS software can synchronize transportation activity across VLC's entire supply chain network, enabling better inventory management and increased throughput for the company as well as its customers and suppliers.

In outbound part, they use A4D (Applications for Distribution) as their logistics information system. This is the name of VLC's unique e-business platform that links together and provides current information throughout the order-production-distribution sequence. All global transport paths are integrated into the system, which calculates the delivery date as soon as the customer orders his car. The major functions of A4D can be seen in Figure 3



Source: VOLVO Logistics Corporation

Figure 3. The major functions of A4D system overview

2.2.1. Calculation of Distribution Start and End Date

Based on different kind of master data A4D calculates promised delivery date/ETA and the latest possible starting date for the distribution process. Calculations can be based on Requested Delivery Date or ASAP requests.
This calculation can be executed:

- As a simulation during the sales process
- At order entry
- At firm plan
- At factory complete
- At ready for distribution
- At other trigging points

Transporters can plan their routes already at delivery promise.

- Land transporters can always get the expected transport requirements already from the moment A4D calculates a delivery promise/ETA up to the pickup location
- The information is available on the Web and/or can be ordered by the transporters as a file directly to his own systems
- The transporters can start the booking either in A4D or order EDI-files to the own system and return the confirmed vehicles to A4D. Vehicles are available for booking normally at the same time as they are physically in place
- Sea transporters: All bookings and confirmations are done on A4D's market place for Vessels

Dispatch function is designed for trailer transports

a) Complete functionality
    - Capacity Planning
    - Transport Booking/Confirmation
    - Lot/Shipment Formation
    - Picking Lists
    - Documents
b) These functions can be done partly or fully in your own systems and communicated to A4D using established EDI-messages.
c) A4D can send pre-notifications to goods receivers

Parking/Yard Management is an integrated module in A4D Functions

- Search for vehicles, parking spaces, booked vessels etc
- Stock maintenance program
- Parameter settings for optimization
    - Simple yard
    - Advanced yard
- Reports
    - Summaries
    - Stock inventory
    - Used and available capacity

Statuses for Embedded Process Management can be received directly in A4D

- When other processes (e.g. PDI, extra equipment, CVS) are embedded in the distribution Process, it is necessary to receive statuses also for these to have a correct plan/ETA.
- The reporting can be done directly in A4D or via files.
- Different search possibilities are available online.

A4D can track and trace occurrences in real-time

- The user can use code “Location, Country, Transporter, Dealer, IP, Factory, Main Type” to search the information in real-time.

All necessary transport documents and Address Labels are issued by A4D

- All necessary transport documents are issued by A4D, e.g. CMR, ED, B/L.
- Each vehicle has its own address label issued by A4D including the distribution plan and bar codes for enabling data capturing via scanners.
- A4D creates and sends all necessary customs information to:
    - National customs system inside and outside EU
    - Overseas shipping companies
    - Ports
    - Transporters
    - Factories

Hold, Distribution Order - Search

- A search can be made by the code ‘administrative’, ‘dealer’, ‘launch’, ‘market’, ‘quality’ or ‘transport’.

A4D’s follow up module enables continuous improvements

- Operational Data Warehouse
    - Real-time query database for special queries and reports not covered by A4D
- Data warehouse emphasizing on Management reporting:
    - Delivery precision
    - Lead-time
    - Quality[3]

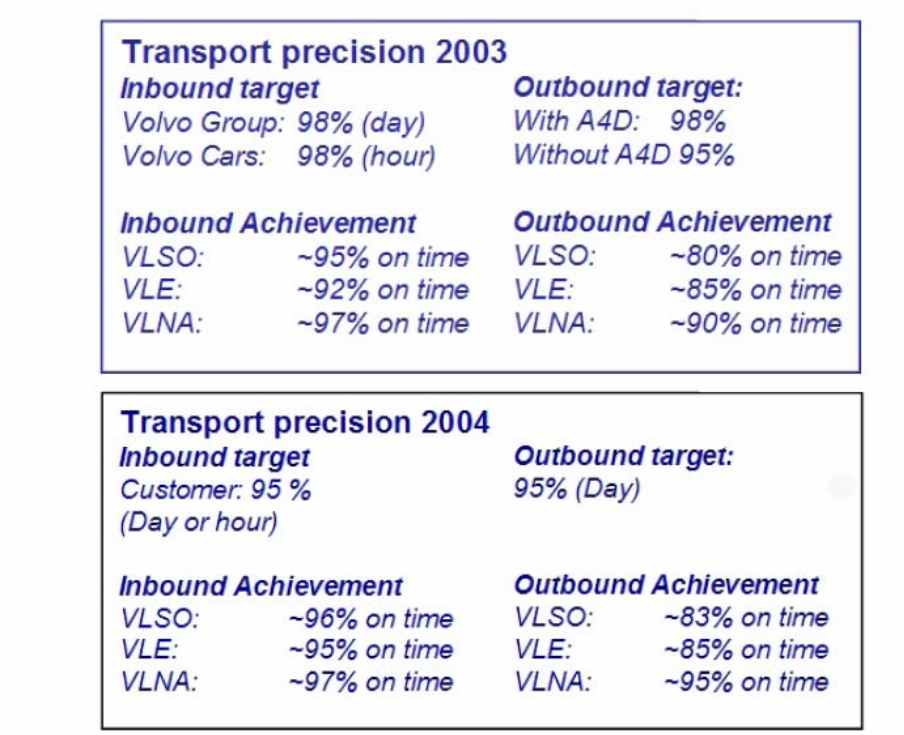
2.2.2. The Value

VOLVO states that by using the e-Logistics system, they reduced inventory and transportation costs, improve operational efficiencies, and ensure just-in-time (JIT) deliveries. E-Logistics service creates customer value since entire logistics process is managed on-line. This begins with order entry and than moves to warehouse, inventory management, order fulfillment, shipping, delivery, transactions, and customer care. They also state that, the working capital does not have a significant reduction since the working order fills and invoice accuracy always keep a very high level. The reduction of fixed assets is continuous after the JIT production and JIT delivery have been adopted. Due to this, the inventory is controlled in a low level.

VOLVO emphasis that the reduction of administration costs is significant by using the e-Logistics system, because the information is collected in real-time and decision making process is faster.

The lead time and the transportation time were reduced significant by using ATLAS and JIT delivery system. Also transport time precision is very high at the year 2004 compared with the year 2003, as showed in Figure 4.

VOLVO has with the V-EMS a control of packaging balance on hand and costs for all users, improved empty packaging order management with analysis and planning, a flexible independent control system, reduced operating costs by minimizing the total empty packaging stock, reduced administration and transportation costs, detailed empty packaging status information at depots, inventory and stock reporting functions, and improved information quality and follow-up metrics.



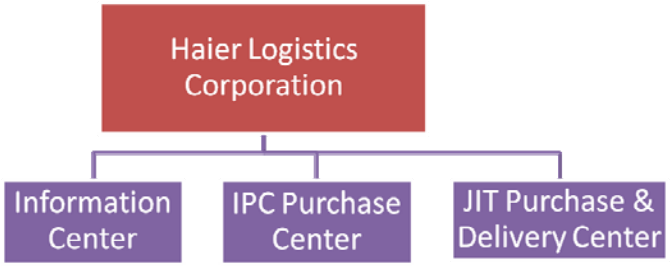
Source: VOLVO Logistics Corporation

Figure 4. Transportation precision

VOLVO also state that the cost is saving from the following aspects: transport cost by the new route planning system and the help of GPS; packaging cost, HUB/Warehousing cost, logistics services cost e.g. repacking, labeling and etc and purchasing cost by the new planning system, cost for expedite and rush transport by the transport planning system, cost for consequences if production disturbances by the inventory management system.

3. Haier Logistics Corporation (HLC)

Haier Logistics Corporation (HLC) is a sister company within the Haier Group, the company develops and provides transport and logistics solutions for the Haier Group as a whole and also has some external customers from all over the world, such as such as Nestlé, AFP, HP and etc. The structure of HLC can be seen at Figure 5



Source: HLC internal material

Figure 5. The structure of HLC

The Haier logistics inherited the unique enterprise culture and the management system as well as the management innovation ability from the Haier group. They developed several strategies in order to offer total customer satisfaction. Among these strategies highly importance was given to rapid feedback that helped customers to win competitive advantage based on the time aspect. With the enterprise culture of speed, innovation, and SBU, the HLC can not only seek the best logistics solution for their customer but also can control entire logistics system by the unique market chain system and the quantitative KPI benchmark management.

HLC works for 7 big production bases of Haier group, they have 42 local delivery centers, more than 3,000,000 storehouse space and more than 300 transportation corporations, the entire network system is linked by SAP R/3 ERP and SAP LES. The network covers 1,500 service centers, 1,000 sell centers and more than 16,000 vehicles, the promises of logistics service is: the request of national lines delivers in 2 days, the request of key city, 8 hours to deliver and the request of region delivers in 24 hours.

3.1. The Process of e-Logistics

There are five steps when HLC establish the e-Logistics system:

Step 1 Framework Construction

In this step, HLC critically examined the current situation, analyzed the pros and cons of the e-Logistics process, and brainstormed innovative methods in which to implement the new process.

Step 2 Function integration

This step mainly emphasizes the steps taken to achieve customer satisfaction and related criteria. Here HLC adopted Material Requirements Planning (MRP), a very efficient tool and technology to forecast and control customer's needs to plan and control. Without the forecasts, distribution and manufacturing's efficiencies would be crippled. Currently, the e-Logistics system integrates all the information to quicken the response in manufacturing and distribution.

Step 3 Internal supply chain integration

In this step, HLC first integrated the existing internal activities directly controlled by the corporation, done by an information network between departments. The output of this integration resulted in better planning and more efficient control. To support this integrated system, HLC employed Supply Chain Planning (SCP) and ERP. The base of these two kinds of information technologies is a Client/Server system. Effective SCP integrated all the daily operation functions, including customer demand forecasts, resource allocations, equipment management, production schedules, and purchasing plans. ERP systems integrated those executive functions in operation flow, such as orders management, financial management, stock planning, and production management. The goal of supply chain management is consistent with the corporation's goal, which is to attain total customer satisfaction. The e-Logistics system allows the delivery of the products to the customer at the most competitive prices.

In this step, HLC also used Electronic Data Interchange (EDI) and the Internet to foster better relation with suppliers. EDI has been considered a useful component of inter- organizational information systems. One of the benefits of implementing EDI inter- organizationally is to provide opportunities for HLC's partners to better communicate, which in return benefits HLC and all parties involved. These benefits include higher levels of operational efficiency, lower distribution time, and improved customer service.

Step 4 External supply chain integration

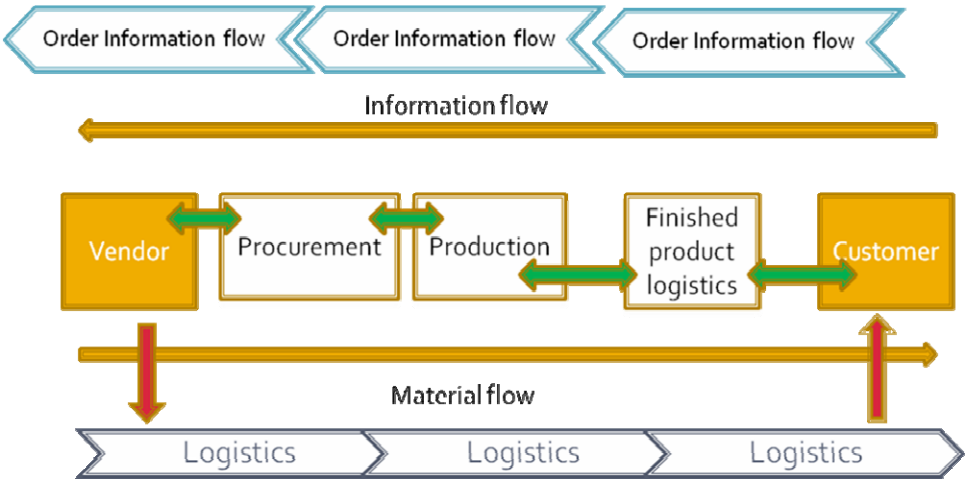
In this step, HLC stressed establishing partnerships with external suppliers. HLC augmented communication with its suppliers, sharing useful information with them. By using Vendor Managed Inventory (VMI), both Haier Group and its suppliers are aware of inventory levels through shared information on the Internet. Now the suppliers have a better estimate of how many inventories Haier will need, reducing inventory costs for the suppliers. At the same time, it ensures the flow of raw material to Haier, which eliminates the down time related to lack of material supply, offering a win-win situation for both Haier and its suppliers.

Step 5. Dynamic alliance of integrated supply chain

In this step, all the parties in the supply chains become a rapid response organization. When orders were received by Haier, all the suppliers worked together to support the flow of raw materials. Not to mention, this kind of quick communication can only be accomplished by an effective information network, such as Internet or Intranet.

HLC's e-Logistics process works as following: when the order is placed, the HLC information center sends a RFQ to the factory, when the manufacture was finished, the HLC label the products and issue a tracking number to customer, the customer can track the shipping on the Internet, when then shipment is finished, the evaluation process is starting, all parties need evaluate the process in order to implement continuous improvement.

HLC uses mySAP SCM in their HLES-WMS (Haier Logistics Execution System) as their e-Logistics information system. The structure of mySAP SCM1 can be seen in Figure 6



Source: HLC internal material

Figure 6. The HLC's e-Logistics System with mySAP SCM

3.2. The Value

With the help of HLC, Haier group experienced tremendous growth during past years; it can be described as follows:

Revenue: $421 thousands in 1984, while it was $4.9 billion in 2000, $8.32 billion in 2001, and $12.53 billion. Tax: - 14.7 million RMB in 1984; while it was $363 million in 2000, and $0.53 billion in 2005 The price of Haier's trademark: $466 million in 1995; while it was $3.63 billion in 2000 and now it was $6.3 billion in 2005. The category of Haier's products: only one type of refrigerator in 1995; now it has more than 10 800 types of products in 69 categories The revenue for export: since 1998, the revenue from export has increased sharply. It reached $356 million in 2001 and become the No. 1 in the electrical appliance industry in China and now it increased to $0.65 billion in 2005

HLC states that through JIT (Just in Time) purchase, JIT delivery and JIT distribution, the goal of zero overstock can be met. The cost of the finished products in Haier accounted for 7.9% of the sales income in 2004, whereas the national average was 30% for the 180 thousands domestic enterprises; the logistic management cost in Haier accounted for 7.0% of the total commodity cost, whereas the cost in other enterprises was 15%. The company consider the place utility is so important but it's not the value created by e-Logistics system, HLC realizes their goal as zero stock, zero delivery capital, and zero distance with customers. The mission of "zero stock" logistics is to eliminate distance with time and stock volume with time efficiency. HLC's goal is to eliminate all stock in warehouse.

JIT purchase: Purchase is precisely arranged according to the actual needs; needed parts and raw materials are procured through worldwide suppliers for order fulfillment. JIT supply chain: HLC's warehouse is just a transit station in which all materials can only be stored for 7 days at most. In HLC automated high-bay warehouses, parts, and components will be allowed for 3 days.

"Zero working capital" is believed to be the capability to change cash into material objects and then convert material objects into cash. Zero working capital means no fund is used as floating capital. Before making the payment to sub-suppliers, Haier receives payment from buyers. This can be realized as production is scheduled at request of customers. This will result in healthy operation of the enterprise.

Zero distance is important for Haier to acquire orders. Haier strives to shorten or even eliminate the distance to buyers to obtain and satisfy individual orders. If the distance is not eliminated, Haier might not easily know what customers need and how to satisfy their demands. Under "zero distance", Haier will, immediately after obtaining the purchase order, take every effort to satisfy the needs of customers. In the process, delivery efficiency plays a significant role to shorten the time with space efficiency. Buyers can place orders at the Internet and Haier will deliver the ordered goods to the buyers. In past five years with the goal "zero distance" with global customers and quicker information value, Haier received 250,000 pieces of customer information, offering individualized design, an increase in customers to 2,180,000, and an increase in the e-Logistics turnover rate to more than 100%.

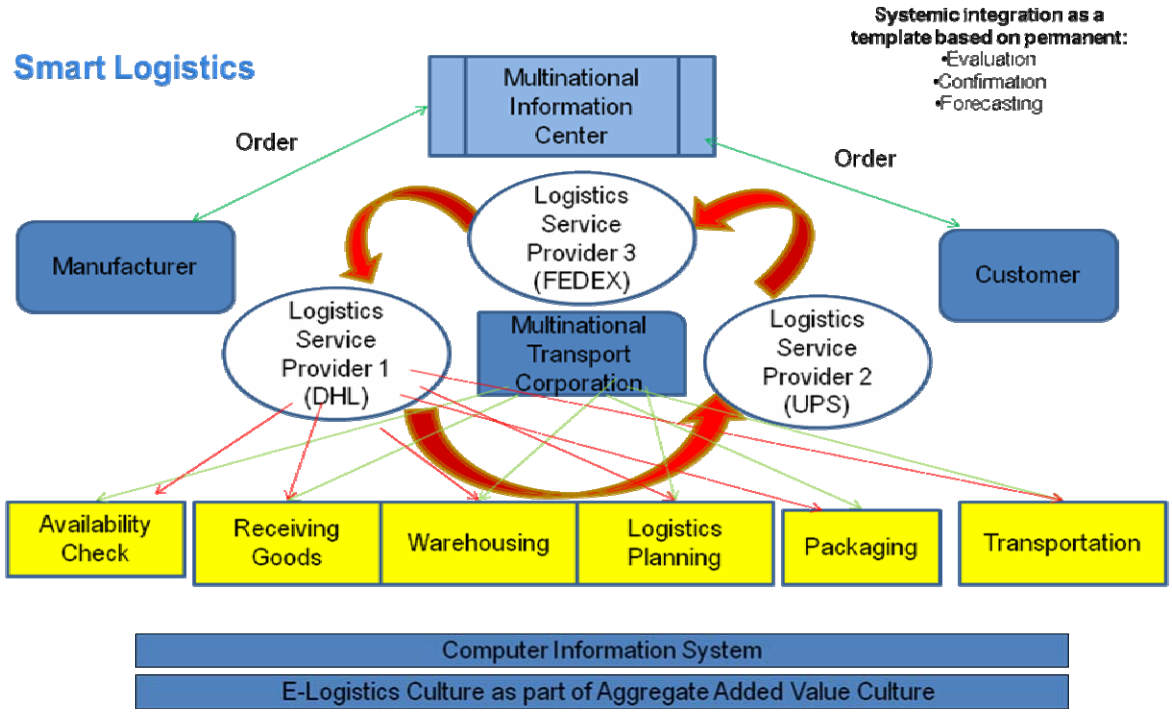
4. Implications for Practitioners and Management

When implement the e-Logistics system, it's crucial to have a clear picture of current level of your company. When design e-Logistics processes, the steps are different for different kinds of logistics companies. For a young company, continue improvement is important so evaluation process must be considered; for an experienced company, adopting e- Logistics system in every detail process is important.

When design an e-Logistics Information System, it's important to have a structured system to follow. This provides logistics manager with timely and accurate information for the basic management functions of planning, implementation, and control. When evaluating the value of e-Logistics system, it's important to recognize the current situation of the company. Different level of development emphasize on different aspects where the e-Logistics create value.

When considering the factors that influence an e-Logistics system, it's important to recognize that the same factors have different level of impact to different kinds of companies and some factors exist due to regional or political reasons.

The proposal of a new model of e-logistics is shown hereunder. So called "Smart Logistics" is an integrated system that can be updated and quickly connected between Logistics Service providers (LSP) and customers without any extra costs. This system is efficient and cost free. The configuration can be seen in Figure 7.



Source: Utilization of e-logistics in multinational companies to overcome difficulties of today's economic environment

Figure 7. Smart Logistics

4.1. The description of the system

There is interconnectivity among supplier, customer, vendor, and Logistics Service Provider's IT systems. Orders are entered by customer and sent to manufacturer via an information centre. After the goods are manufactured, they are shipped from supplier to customer. The added value of Smart Logistics consists of using several LSP's connected to the same system that can offer the best logistics solutions. This will increase delivery's speed and reduce transportation cost.

4.2. Implications for Theory

Overall purpose of this paper was to "provide a clear understanding of how organizations utilize e-Logistics to create value within the Supply Chain." As we have found many previous studies on e-Logistics system have focused on process, information system, value, and influential factors.

When it comes to the companies staying in the different level of development, the emphasis of e-Logistics system is different and some new aspects should be added. The majority of the findings for this study show that the current theory is mostly about traditional logistics. The fundamental logistics theory in term of the factors that influence e-logistics system are not well-established yet, to describe more actors that impact e-logistics system is necessary.

5. Conclusions and Implications

This paper provides an insight of e-Logistics system for companies which stay in the different level of development. It's interesting to further investigate more differences of different level. This study provides an insight of some factors that influence the e-Logistics system due to regional or political reasons. It's interesting to investigate more regional companies in different countries. According to current study, e-logistics are widely used in big companies. How similar systems are used in small companies and to what extension they are used could be one interested topic to investigate.
The introduction of "Smart Logistics" can be a solution to actual financial crises that companies are dealing with. "Cost reduction" is a frequent term used nowadays, and the implementation of a system that will transform research into business activity will indeed give a concrete meaning of this terminology.

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